Data Sheet
Fujitsu PRIMERGY RX500 S7 Quad socket 4 U rack server

Economic Scaling to 4 socket Performance

The PRIMERGY RX Rack Server family is the perfect platform to form dynamic infrastructures for your business processes today and in the coming decade. You will thus benefit several times over from our recognized experience in optimized data center technology and our innovative strength in developing energy-efficient and cost/performance-optimized rack systems for universal use. PRIMERGY rack servers, built upon industry standards, focus from a functional viewpoint on core features: energy efficiency, reliability, optimized for virtualization, ease of operation and maintenance, flexibility for your future. And thus they notably meet your requirements for outstanding cost efficiency. Optimal operating costs and long-term usability comply with the IT quality required by your customers. Our responsibility goes way beyond the hardware as our tailor-made service packages mean that you can rely on the best support for your IT during its whole lifecycle.

PRIMERGY RX500 S7

The Fujitsu PRIMERGY RX500 S7 not only provides the next generation Intel® Xeon® processor E5-4600 product family with integration of the PCI Express bus and next generation Intel QPI interconnect to boost performance as well as energy efficiency.
Moreover, the RX500 S7 enables new economic scale-up from 2 to 4 socket server computing by leveraging the price performance efficiency of 2 socket servers into the 4 socket performance class. Starting with a 2 processor configuration, this 4u rack server can easily scale-up to 4 processors and double its memory up to 1536GB RAM inside the same 4U rack chassis without changing the server and rack infrastructure. Its energy conscious design and usage of low voltage memory pays dividends in superior performance per Watt and higher expandability than with 2 socket server standards.

Features & Benefits

Main Features	Benefits
Double the expandability and performance of a dual socket system	
■ 4x Intel Xeon processor E5-4600 product family ■ 48 DIMMs with in total 1536 GB RAM ■ 11x PCIe Gen3 slots directly connected to the processors ■ 8x 2.5-inch HDDs	■ Cut costs for management and energy by running more workloads on the fewer servers ■ Enables you to run more and larger virtual machines on a single server
Scale up with peace of mind	
■ Easy upgrade from 2-socket to 4-socket ■ Modular concept for LAN, RAID and Power Supply Units	■ Enables you to start with a 2-socket configuration and scale up easily at any time without impacting the server and rack infrastructure ■ Enables individual and cost-saving configuration of the server according to the need of today with upgrade option to meet the demand of tomorrow
Economic in costs	
■ Intel® Xeon® processor E5 family ■ Low cost DIMMs ■ Simplified power management with pre-defined power profiles ■ 4x hot-plug and redundant power supply (PSU) with platinum efficiency (94%)	■ Leverage the leading price/performance ratio of the dual socket generation into the quad socket area ■ Reduce energy costs and heat emission

Technical details

PRIMERGY RX500 S7	
Housing types	Rack
Mainboard	
Mainboard type	D3039
Chipset	Intel® C600
Processor quantity and type	2 or 4 x Intel® Xeon® processor E5-4600
Processor	Intel® Xeon® processor E5-4603 (4C/8T, 2.00 GHz, TLC: 10 MB, Turbo: Yes, 6.4 GT/s, Mem bus: 1066 MHz, 95 W)
	Intel® Xeon® processor E5-4607 (6C/12T, 2.20 GHz, TLC: 12 MB, Turbo: Yes, 6.4 GT/s, Mem bus: 1066 MHz, 95 W)
	Intel® Xeon® processor E5-4610 (6C/12T, 2.40 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s , Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor E5-4617 (6C/6T, 2.90 GHz, TLC: 15 MB, Turbo: Yes, 7.2 GT/s , Mem bus: 1600 MHz, 130 W)
	Intel® Xeon® processor E5-4620 (8C/16T, 2.20 GHz, TLC: 16 MB, Turbo: Yes, 7.2 GT/s , Mem bus: 1333 MHz, 95 W)
	Intel® Xeon® processor E5-4640 (8C/16T, 2.40 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s , Mem bus: 1600 MHz, 95 W)
	Intel® Xeon® processor E5-4650 (8C/16T, 2.70 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s , Mem bus: 1600 MHz, 130 W)
	Intel® Xeon® processor E5-4650L (8C/16T, 2.60 GHz, TLC: 20 MB, Turbo: Yes, 8.0 GT/s , Mem bus: 1600 MHz, 115 W)
Processor notes	A mimimum of 2 processors must be configured, no mix of different processor types
Memory slots	48 (12 DIMMs per CPU, 4 channels with 3 slots per channel)
Memory slot type	DIMM (DDR3)
Memory capacity (min. - max.)	8 GB - 1536 GB
Memory protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Rank sparing memory support Memory Mirroring support
Memory notes	Max. 8 memory modules/CPU with quad-rank RDIMM; max. 12 memory modules/CPU with single or dual-rank RDIMM or single, dual-rank or quad-rank Load-Reduced (LR) DIMM. Memory Mirroring with identical modules in both channel pairs of a bank (4 modules per bank), Rank sparing or Performance Mode with identical modules in all four channels (4 modules per bank).
Memory options	4 GB (1 module(s) 4 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM
	8 GB (1 module(s) 8 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM
	16 GB (1 module(s) 16 GB) DDR3 LR LV, registered, ECC, 1333 MHz, PC3-10600, LRDIMM
	16 GB (1 module(s) 16 GB) DDR3 LV, registered, ECC, 1600 MHz, PC3-12800, DIMM
	32 GB (1 module(s) 32 GB) DDR3 LR LV, registered, ECC, 1333 MHz, PC3-10600, LRDIMM
Interfaces	
USB ports	7 x USB 2.0 (2x front, 2x rear, 1x internal for backup devices, 1x USB stick and USSD)
Graphics (15-pin)	2 x VGA (thereof 1x front optional)
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC or system or shared
LAN / Ethernet	2
Service LAN (RJ45)	1 x dedicated management LAN port for iRMC S3 (10/100/1000 Mbit/s) Front management LAN port as option Service LAN traffic can be switched to shared onboard Gbit LAN port or optional Modular LAN 2x10Gbit controller

Onboard or integrated Controller	
RAID controller	4 port for internal 3G SATA HDDs with RAID 0/1/10 (Intel® C600) upgradeable by SAS Enabeling Key to connect SAS LTO devices additional RAID controller options are described under Components RAID controller
SATA Controller	Intel® C600, 1 x SATA channel for ODD
LAN Controller	Intel® Ethernet Controller I350, 2 x 10/100/1000 Mbit/s Ethernet (I/O acceleration), Modular integrated on-board LAN offers upgrade options for additional 2x1 Gbit/s , 4x 1 Gbit/s or 2x 10 Gbit/s. PXE-Boot via LAN from PXE server, iSCSI boot (also diskless)
Remote Management Controller	Integrated Remote Management Controller (iRMC S3, 32 MB attached memory incl. graphics controller) IPMI 2.0 compatible
Trusted Platform Module (TPM)	Infineon / separate module; TCG V1.2 compliant (option)
Slots	
PCI-Express 3.0 x8	9 x Full height (here of 1 is reserved for Modular RAID controller)
PCI-Express 3.0 x16	2 x Full height
Slot Notes	One PCIe Gen3 x8 slot may be occupied with a modular LAN controller if configured. One PCIe Gen3 x8 slot may be occupied with a modular RAID controller if configured. Important: 5 PCIe x8 and 2 PCIe x16 slots are supported with the 1./2. processor. 4 additional PCIe x8 slots are supported only with 3./4. processor.
Drive bays	
Storage drive bays	8
Storage drive bay configuration	8x 2.5" SAS/SATA HDD/SSD
Accessible drive bays	1 x 5.25/0.5-inch for CD-RW/DVD 1 x 5.25/1.6-inch for backup devices
Notes accessible drives	All possible options described in relevant system configurator.
General system information	
Number of fans	4
Fan configuration	redundant / hot-plug
Fan notes	3+1 redundant
Operating panel	
Operating buttons	On/off switch Reset button NMI button ID button
Status LEDs	System status (orange / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (orange / yellow) Identification (blue) LAN connection (green) LAN speed (green / yellow)
Service display	ServerView Local Service Display (LSD)
BIOS	
BIOS features	ROM based setup utility Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Windows and Linux versions Local and remote update via ServerView Update Manager SMBIOS V2.7 Remote PXE boot support Remote iSCSI boot support

Operating Systems and Virtualization Software

Certified or supported operating systems and virtualization software	Microsoft® Hyper-V Server 2012
	Microsoft® Windows Server® 2012 Datacenter
	Microsoft® Windows Server® 2012 Standard
	Microsoft® Hyper-V™ Server 2008 R2
	Microsoft® Windows Server® 2008 R2 Datacenter
	Microsoft® Windows Server® 2008 R2 Enterprise
	Microsoft® Windows Server® 2008 R2 Standard
	Microsoft® Windows HPC Server® 2008 R2 Suite
	Microsoft® Windows® Server 2008 Datacenter
	Microsoft® Windows® Server 2008 Enterprise
	Microsoft® Windows® Server 2008 Standard
	VMware vSphere™ 5.0 Embedded
	VMware vSphere™ 5.0
	Novell® SUSE Linux Enterprise Server 11
	Novell® SUSE Linux Enterprise Server 10
	Novell® SUSE Linux Enterprise Server 10 with XEN
	Red Hat® Enterprise Linux 6
	Red Hat® Enterprise Linux 5
	Red Hat® Enterprise Linux 5 with XEN
	Citrix® XenServer®
Operating system release link	http://docs.ts.fujitsu.com/dl.aspx?id=d4ebd846-aa0c-478b-8f58-4cfbf3230473
Operating system notes	Support of other Linux derivatives on demand

Server Management

Standard	ServerView Suite - Deploy SV Installation Manager SV Scripting Toolkit SV Deployment Manager (30-day trial version) ServerView Suite - Control SV Operations Manager incl. PDA and ASR & R (Prefailure and Analysis; Automatic Server Recovery and Restart) SV Performance Management SV Power Management SV RAID Manager ServerView Suite - Maintain SV Remote Management (iRMC) SV Update Management (BIOS, Firmware, Windows Drives and SV Agents) SV Asset Management SV Online Diagnostics ServerView Suite - Integrate SV Integration packs e.g. for Microsoft System Center, Nagios, HP, SIM, HP NNM, IBM Tivoli, Altiris Deployment Solutions and others
Option	ServerView Suite - Deploy SV Deployment Manager (full version) ServerView Suite - Maintain iRMC Advanced Pack incl. Advanced Video Redirection (AVR) and Remote Storage ServerView Suite - Integrate SV Integration pack for Fujitsu ManageNow® solution
Server Management notes	Regarding Operating System dependencies for ServerView Suite software Products see dedicated Product Data sheets.

Dimensions / Weight

Rack (W x D x H)	482.6 mm (Bezel) / 448mm (Body) x 767.4 x 176 mm
Mounting Depth Rack	743 mm
Height Unit Rack	4 U
19" rackmount	Yes
Weight	up to 35 kg

Dimensions / Weight	
Weight notes	Actual weight may vary depending on configuration
Rack integration kit	Rack integration kit as option

Environmental	
Operating ambient temperature	10 - 35 °C
Operating relative humidity	10 - 85 % (non condensing)
Operating environment	FTS 04230 – Guideline for Data Center (installation locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	53 dB(A) (idle) / 53 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	7.0 B (idle) / 7.0 B (operating)
Noise notes	at ambient temperature <23°C Noise emissions and operation modes depend on system configuration.

Electrical values	
Power supply configuration	1-4x 800 W hot-plug power supply
Max. output of single power supply	800 W
Power supply efficiency	94 % (80 PLUS platinum)
Hot-plug power supply redundancy	Yes
Rated voltage range	100 V - 240 V
Rated frequency range	47 Hz - 63 Hz
Rated current max.	14.0 A – 5.8 A (100 V / 240 V)
Active power (min. configuration)	160 W
Active power (max. configuration)	1400 W
Active power note	To estimate the power consumption of different configurations use the Power Calculator of the System Architect: http://configurator.ts.fujitsu.com/public/
Apparent power (max. configuration)	1470 VA
Heat emission	5040.0 kJ/h (4777.0 BTU/h)

Compliance	
Europe	CE Class A *
USA/Canada	CSAc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request. * Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Compliance link	http://sp.ts.fujitsu.com/sites/certificates/

Components

Storage drives	SSD SATA, 6 Gb/s, 400 GB, MLC, hot-plug, 2.5-inch, enterprise
	SSD SATA, 6 Gb/s, 200 GB, MLC, hot-plug, 2.5-inch, enterprise
	SSD SATA, 6 Gb/s, 100 GB, MLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 400 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 400 GB, MLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 200 GB, MLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 100 GB, SLC, hot-plug, 2.5-inch, enterprise
	SSD SAS, 6 Gb/s, 100 GB, MLC, hot-plug, 2.5-inch, enterprise
	PCIe SSD, 785 GB, MLC, Flash drive
	PCIe SSD, 1.2 TB, MLC, Flash drive
	HDD SAS, 6 Gb/s, 900 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 600 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 500 GB, 7200 rpm, hot-plug, 2.5-inch, business critical
	HDD SAS, 6 Gb/s, 450 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 300 GB, 10000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 146 GB, 15000 rpm, hot-plug, 2.5-inch, enterprise
	HDD SAS, 6 Gb/s, 1 TB, 7200 rpm, hot-plug, 2.5-inch, business critical
Backup Drives	DDS Gen5, 36 GB, 3 MB/s, half height, USB 2.0
	DDS Gen6, 80 GB, 6 MB/s, half height, USB 2.0
	LTO3HH Ultrium, 400 GB, 60 MB/s, half height, SAS 3Gb/s
	LTO4HH Ultrium, 800 GB, 120 MB/s, half height, SAS 6Gb/s
	LTO5HH Ultrium, 1500 GB, 140 MB/s, half height, SAS 6Gb/s
	RDX Drive, 320 GB, 500 GB, 1 TB , 25 MB/s, half height, USB 3.0
Optical drives	Blu-ray Disc™ Triple Writer, (6x BD-ROM; 8x DVD; 24x CD), slimline, SATA I
	DVD Super Multi, (8xDVD/DVD+RW, 6xDVD-RW, 5xDVD-RAM; 24xCD/CD-R, 16xCD-RW), slimline, SATA I
SCSI / SAS Controller	SAS Ctrl. 6 Gbit/s 8 ports ext. PCIe Gen2 x8
RAID Controller	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, LSI RAID Ctrl SAS 6G 1GB LSI, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 1GB (D3116C), 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 5/6 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 1GB (D3116), 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 1 GB, Optional FBU (based on LSI SAS2208)
	RAID 0/1 Ctrl., SAS/SATA 6 Gbit/s, Fujitsu RAID Ctrl SAS 6G 0/1 (D2607), 8 ports int. RAID level: 0, 1, 10, No BBU support
Fibre Channel controller	Fibre Channel Host Bus Adapter 1 x 8 Gbit/s Qlogic QLE2560 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gbit/s Qlogic QLE2562 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 8 Gbit/s Emulex LPe1250 MMF LC-style
	Fibre Channel Host Bus Adapter 2 x 8 Gbit/s Emulex LPe12002 MMF LC-style
	Fibre Channel Host Bus Adapter 1 x 16 Gbit/s Emulex LPe16000B LC-style

Communication, Network	Converged Network Adapter 2 x 10 Gbit/s PCIe x8 (Emulex)
	Ethernet Ctrl. 1 x 1 Gbit/s PCIe x4 (Intel®)
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe x8 (Fujitsu)
	Ethernet Ctrl. 2 x 10 Gbit/s PCIe x8 (Intel®)
	Ethernet Ctrl. 2 x 1 Gbit/s PCIe x4 (Fujitsu)
	Ethernet Ctrl. 4 x 1 Gbit/s PCIe x4 (Fujitsu)
	InfiniBand HCA 1 x 40 Gbit/s PCIe Gen2 x8 (Mellanox)
	InfiniBand HCA 1 x 40 Gbit/s PCIe Gen3 x8 (Mellanox)
	InfiniBand HCA 1 x 56 Gbit/s PCIe Gen3 x8 (Mellanox)
	InfiniBand HCA 2 x 40 Gbit/s PCIe Gen2 x8 (Mellanox)
	InfiniBand HCA 2 x 40 Gbit/s PCIe Gen3 x8 (Mellanox)
	InfiniBand HCA 2 x 56 Gbit/s PCIe Gen3 x8 (Mellanox)
Rack infrastructure	Rack Mount Kit
	Cable Management for 19-inch DataCenter / PRIMECENTER Racks
	Cable Arm 2U for PRIMECENTER- and 3rd-party racks

Warranty	
Standard Warranty	3 years
Service level	Onsite Service (depending on country)
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty/Index.asp?LNG=COM
Maintenance and Support Services - the perfect extension	
Support Pack Options	Globally available in major business areas: 9x5, Next Business Day Onsite Response Time 9x5, 4h Onsite Response Time 24x7, 4h Onsite Response Time
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Lifecycle	5 years after end of product life
Service Weblink	http://www.fujitsu.com/fts/services

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu PRIMERGY RX500 S7, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
www.fujitsu.com/global/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu PRIMERGY RX500 S7, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment/

Green Policy Innovation

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